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Yankee WINGS

THE MAGAZINE OF THE YANKEE AIR FORCE

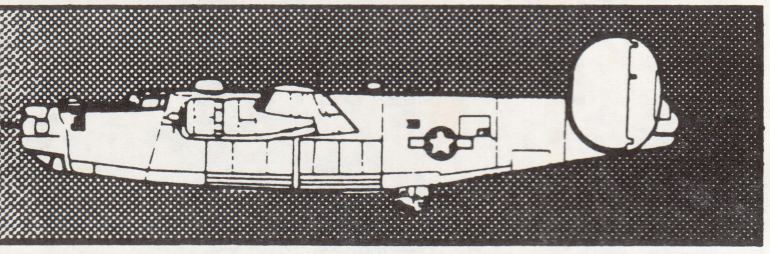
YANKEE AIR FORCE

IN THIS ISSUE...

- Lockheed's F-104 Starfighter
- 1948 Berlin Airlift
- Boeing P-26 "Peashooter"
- Was Coventry Sacrificed for "Ultra"?

.... and more!

Yankee WINGS



Official Publication of The Yankee Air Force©

Inside *Yankee Wings*

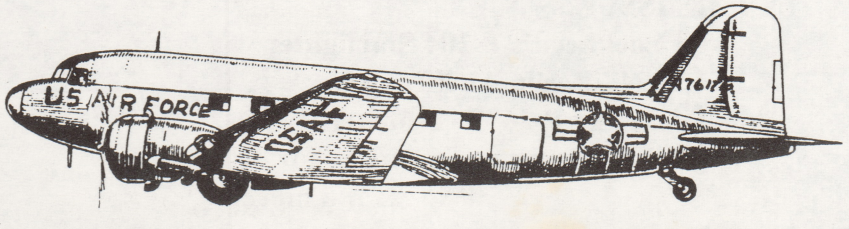
In our cover story, **Jack Stankrauff** describes the history and service career of the USAF's Lockheed F-104 Starfighter. The F-104 was but one of the many thoroughbreds born of the Lockheed Skunk Works under Kelly Johnson. Both man and machine are featured on the cover by Jim Serdenis, and feature articles on both Johnson and the Skunk Works are planned for future issues.

Mr. Stankrauff has also penned the overview on the Berlin Airlift of 1948, which begins on page 8, as well as the brief on Boeing's P-26 "Peashooter", which was the Air Corps' first all-metal, monoplane fighter. World War II action returns via an article on page 22 entitled, "Was Coventry Sacrificed for Ultra?". It presents a new and plausible rebuttal to a popular WWII concept.

Another historical perspective appears in the review of author/historian Tim O'Callaghan's new video, *Henry Ford's Aviation Ventures, 1924 - 1936.* Members will also find informative the 1996 Annual Meeting Report and the accompanying Flyable Aircraft Policy.

The cover correctly identifies that this is the July - September 1996 issue. As editor I am painfully aware that it is unacceptably late, however it will take some time to pull out of this hole we're in. It has been suggested that we simply revise the cover date and move on, but that strikes me as a worse alternative since we now publish just four time a year. Your patience is appreciated.

- Jim Hanford



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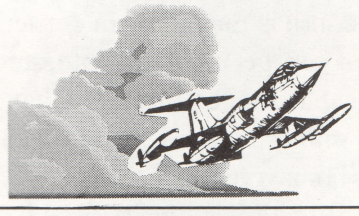


Starfighter

"Missile With A Man In It"

by Jack B. Stankrauff

"Where are the wings?" a confused Lockheed test pilot asked when he first saw the F-104 Starfighter--soon to become the Air Force's first Mach 2 fighter--with its rocket-shaped fuselage and thin wings which looked more like a missile than an aircraft.

During the Korean War, Lockheed designer Clarence L. "Kelly" Johnson went to Korea and asked the U.S. Air Force (USAF) fighter pilots what they wanted in a fighter. They unanimously answered high speed and altitude. Johnson returned to his Lockheed office at Burbank, California and drafted a design proposal. He took his proposal to the Air Force in the Pentagon in November 1952. In a few hours Kelly was headed back to California with an Air Force contract letter in his pocket.

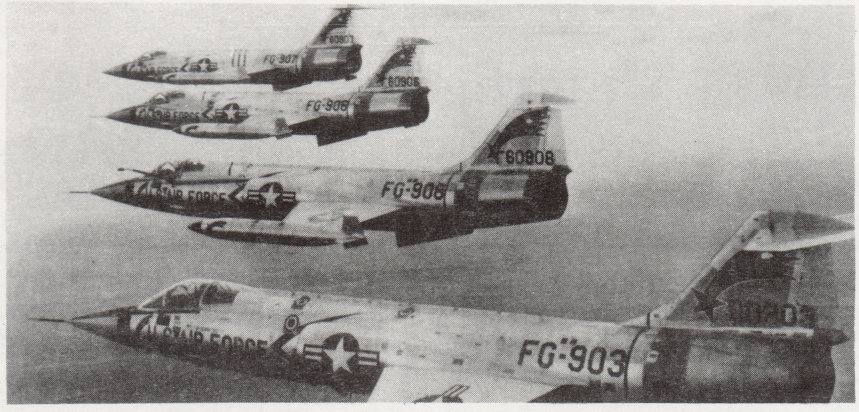
Model 83

While swept-back wing technology was the design trend at that time, Johnson's Lockheed design team put straight, razor-sharp wings (so sharp that coverings were put on the wings to protect maintenance crews) on their Design Model 83. To develop these short wings, Johnson told USAF General Earle Partridge, Chief of Air Research and Development, he'd have to put the wing designs on rockets and test them."...If we had a bunch of five-inch rockets, we could put the wing models on the rockets. If we shot enough of them we could find out how to make a wing with the thickness we want--about twice that of a razor blade. We can see if it flutters or not in supersonic flight." Partridge immediately ordered rockets to be shipped to Lockheed. Two weeks later, 460 five-inch rockets arrived at Burbank. Obviously, the lethal, explosive-filled rockets couldn't be tested there, so Johnson shipped them to the vast uninhabited expanse of Edwards Air Force Base. The rockets were configured with over 300 wing designs as well as motion picture cameras and telemetering instrumentation to radio data to ground stations. These winged rockets were flown at speeds of up to 1,500 mph until a design was finalized. Johnson's "Flying Tail" design was also included in the rocket tests and also proved successful.

What resulted was the blindingly-fast XF-104 Starfighter day interceptor with its remarkable thin wings. On February 7, 1957 the needle-nosed Starfighter prototype took to the air on its maiden flight.

The two prototype XF-104s made over 8,000 test flights during exhaustive Lockheed trials. Several problems were initially surmounted during the testing period. Engine failure was solved by installing a more powerful General Electric J79 engine in place of the Wright J65. Another malady corrected was the Super Stall--the tendency of the Starfighter to pitch up in a stalled attitude. Wing tip fuel tanks were rebuilt after they slammed into the fuselage when jettisoned. Some F-104s entered limited operational service in 1958. From then until 1967, USAF Starfighters cooled global hot spots over the Formosa Straits, Berlin, and Cuba as well as Vietnam. But the F-104A romance between Lockheed and the USAF

Luftwaffe F-104G displays its load-carrying capability - nine external hard points. (Lockheed)



Flight of 479th TFW F-104Cs. (USAF)

then died. Due primarily to its limited range the A models were removed from the USAF inventory. Some went to Nationalist China and Jordon, while others were converted to drones, relegated to special testing, or sent to Air National Guard units.

A Record Setter

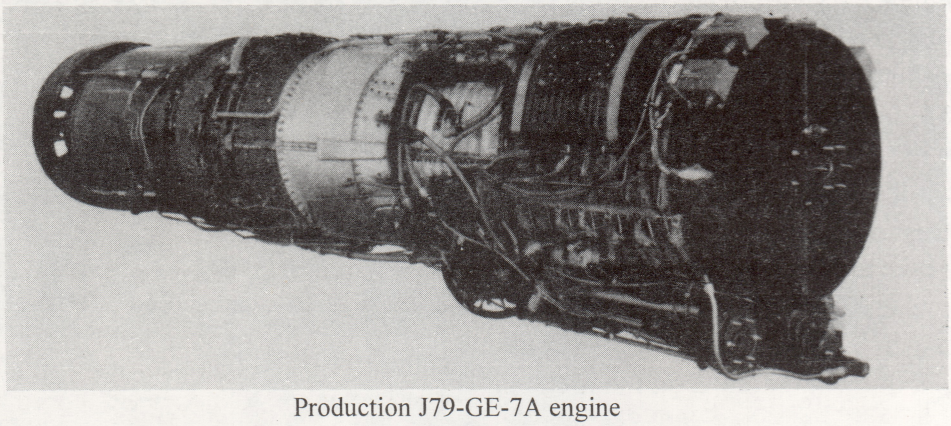
Despite its shortcomings, the Starfighter was the first operational USAF aircraft to hold both speed and altitude records simultaneously. An F-104A piloted by USAF Capt. W.W. Irwin set a world speed record of 1,403.79 mph on May 16, 1958, while another flown by USAF Capt. H.C. Johnson, achieved an altitude record of 91,423 ft. nine days later. On December 14, 1959, USAF Capt. J.B. Jordon in an F-104C achieved an even greater height - 103,389 ft.

The 14,800 pound thrust J79-GE-3A engine enabled the F-104A to attain a maximum speed of 1,450 mph at sea level and a rate of climb of 50,000 ft. per min. It had a service ceiling of from 57,750 to 60,000 ft. (depending on the model), and a range of 1,300 mi. with drop tanks. The F-104A and subsequent models had a wing span of 21 ft., 9 in.; a length of 54 ft., 9 in. and a height of 13½ ft. The average empty weight of the A through E models was over 14,000 lbs. And loaded, almost 29,000 lbs.

The A's armament included an M61 Vulcan 20 mm. cannon with a firing rate of 6,000 rounds per minute and maximum ordnance load of 310 lbs. Usually consisting of folding fin aerial rockets and AIM-9 Sidewinder air to air missiles directed by AN/ASG-14 Fire Control System. All of these avionics and weapons aside, the Starfighter was challenging to fly.

Love-Hate Relationship

Flying the "Manned Missile" was a love but if wrongly handled, it could turn to hate. A pilot with over 950 hours in the F-104 comments: "The airplane was easy to fly, but very difficult to fly to the edge of the envelope, or to the maximum of its capability. I would say it's the most dangerous, most insidious airplane that I've ever flown. If you don't know your way around the airplane, it has many coffin corners that you can get yourself into, and not be able to get out of. I have known many extremely competent pilots who have not been able to get out of coffin corners that the 104 has put them in. It is a simple plane to start, with a couple of exceptions. There are four 'T' handles that got some people into trouble when they mixed them up. On opposite sides of the center console you have the canopy jettison and rudder adjust handles. Since you almost always have to adjust the rudder pedals to your personal preference every time you fly the airplane, there is always the chance that you'll grab the wrong T handle. It has been know to happen, and believe me there is nothing more embarrassing than to be left in the chocks without a canopy! Above those T handles are the T handles for the emergency landing gear lowering system, and the ram air turbine extension. I have know lots of pilots who developed some very interesting mnemonics just to remind themselves of where these handles were. The airplane handles well on the ground. When you select take-off flaps, the rudder limiter cuts out and gives you the full benefit of the nose wheel steering..." The acceleration of the 104 on take off is really impressive, and will leave you always behind

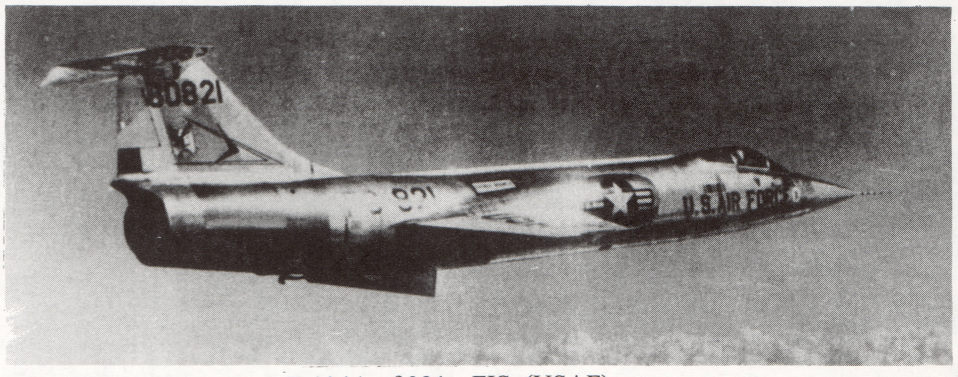

Production J79-GE-7A engine

the airplane until you get used to it. We had abort speeds that we pre-computed, but the 104 with a healthy engine got there so fast that you had a very fleeting 'dead man's zone.' (Too slow to eject, but too fast to keep it on the runway if you had to abort.) There were some engine problems at first, and takeoff was where you usually paid the supreme price for an engine problem. Iven Kincheloe was killed on take off when he had a cold shift on the engine inlet guide vanes, which in turn caused the engine to compressor stall. He was very low and the then downward ejection seat didn't give him room to get out of it. Kincheloe, a Detroit native, had an air force base near Kinross, Michigan named in his honor. I flew the downward ejection seat airplanes on my first checkout, and we all breathed a sigh of relief when the 104 was retrofitted with the upward seat in 1960.

"One of the real dangerous things about the wing tanks of the 104 was the uneven load distribution that was possible if they were filled incorrectly. If you filled the rear and not the front, you would set up a 'flutter,' or oscillation that once started, would actually diverge, eventually tearing the wing off...

"Climb in the 104 was pretty straight forward for a high-performance airplane. Once airborne, and cleaned up, you would accelerate to .92 mach, then hold that speed until you reached about 35,000 to 40,000 ft., at which point you pushed over and accelerated to 1.7 before starting to climb again. That was your max time to climb profile...

"The trim on the 104 is slow, and that's to compensate for the very high speeds. It would do 800 knots indicated. You had a manual rudder...you pushed on cables, just like you do on a Piper Cub...Normally you don't use the rudder until you are at very high angles of attack, in air combat situations, you want to use the rudder as much as you can. Aileron performance is very impressive and as a matter of fact, when the flaps are up with the wing clean, it is limited to about two thirds travel to limit your roll performance, because it could wrap up very quickly. The stick feel is very heavy in pitch and the way you could fight the airplane effectively...that is, at zero G, or max G...



F-104A of 331st FIS. (USAF)

"The stall warning was artificial, and consisted of an eccentric weight on the stick, which would actually shake the stick when the airplane was approaching a stall...The Starfighter is a very stable instrument platform, and I have flown it to a 200 ft. ceiling and ½ mile visibility minimums with no problems. Again, you just have to get used to the higher approach speeds, and remember to anticipate your turns more...

"The parameters of the design were set by the Korean War vets, who wanted an airplane that was faster than the other guys...that would out climb the other guy...that was small, with simple systems, and was best able to use the fighting element of surprise because of its small size. (I think if you study the history of air battles, you'll find that most of the kills were made from deep six...perhaps a ratio of six to one...out of the element of surprise.)...They got just what they wanted in the 104. The simple systems were the 'Gatling' gun, the Sidewinder missiles, and the 20-mile radar that was superlative from a hit-and-run tactics point of view...The F-104 was the first airplane where a significant amount of supersonic formation flying was done...It is a very good formation airplane...very solid...

"Another interesting thing about the 104...the wing tip mounted tanks or Sidewinders actually acted as extensions or end plates, making the airplane more efficient in turns...Cockpit design is the best I've ever seen...

"When TAC (Tactical Air Command) got the 104, they tried to make an air-to-ground fighter out of it, instead of sticking to the air superiority role, and it wasn't designed for dropping bombs. I just don't think the Air Force ever properly understood the plane. It was, after all, the original lightweight fighter!...

"Of all the airplanes I've flown, the F-104 was the most exciting and rewarding. Exciting because of its great performance, and rewarding

Jacqueline Cochrane and the TF-104G in which she set three international speed records in 1964

because the limits that performance took a great deal of skill to reach...The 104 was an airplane in which you could bust your tail quicker than any other I've flown. It just did not allow you many mistakes!...Make a critical error, and by time you've noticed the goof it's often too late to recover..."

Variations on a Theme

In 1958 Lockheed introduced the "C" model with a more powerful, 15,800 pound-thrust General Electric J79-GE-7 engine and an aerial refueling capability. The C-equipped 479th Tactical Fighter Wing was deployed to the Royal Thai Air Base at Udorn in 1965. Although the Cs were intended for air combat missions against the Communist MiGs, no aerial combat engagements occurred. Eventually, the Starfighters were used in air-to-ground bombing and strafing---a role totally unsuited for them. They were pulled out of Southeast Asia in 1967. Subsequent D models were twin seat trainers for the C series.

One F-104 variant proved tragic. Two A models were converted to NF-104s to test 6,000-lb. thrust Rocketdyne rockets for simulating the X-15 descents from 100,000 ft. One flight with the booster seriously injured USAF Capt. Yeager (who broke the sound barrier in 1947) and proved fatal to another pilot. On the positive side, an NF-104 set an altitude record of 119,000 ft. in 1963.

While the F-104's reception was (to be charitable) lukewarm in the United States, Europe's air forces were rebuilding and saw the Starfighter as a hot plane. Beginning in March of 1959 Lockheed signed license-building contracts with several foreign countries to build new and better Super Starfighter Gs. The Super Starfighter's General Electric J79-FE-11A 15,800-lb. engine increased its speed to 1,550 mph at an altitude of 40,000 ft. and a range of 1,628 mi. with a service ceiling of 60,000 ft. The G had the heaviest armament-carrying capability---4,310 lbs. (including nuclear weapons). Lockheed entered into contracts with the following countries (their production figures are in parentheses): West Germany (283), Belgium (198), Italy (417), the Netherlands (354), Japan (207) and Canada (340). Building Starfighters benefitted these countries economically, technically and militarily, or as one aviation writer commented, "The Starfighter's career had has been one of superlatives ... world-wide superlatives." In the U.S., Lockheed built 737 examples. Including units built elsewhere, F-104 production totaled 2,536. Starfighters also served in the air forces of Pakistan, Denmark, Turkey, Greece, Norway, Spain, Jordan, and Nationalist China. These countries used their Starfighters for the roles of reconnaissance, fighter bombers and interceptors. In addition to these roles, the Starfighter starred in another record-breaking role.

Cochran's Feats

Jacqueline Cochran broke several speed records in a Starfighter. She prided herself on being a perfectionist in learning to fly the F-104G. "The fact is: I flew the Starfighter a distance that would have taken me around the world at the Equator. What I was trying to do was to familiarize myself with the flight characteristics of the plane in 1963. To know it well was crucial. Some of my practice flights were made with movie cameras mounted in the cockpit to give me Mach numbers and the temperature of the engine. My flights enabled engineers at...General Electric...to evaluate the plane as to what its optimum maximum speed actually was. That was my purpose really. And I got more speed than anyone expected. I pushed that engine to temperatures that had been prohibited by operating manuals. The engine inlet temperature had been a limiting factor on the speed.

"When a certain maximum temperature is reached in any jet plane, a red light goes on in the cockpit and you've got to pull back on the power. In my 40 flights in 1964 in the F-104G, I exceeded the allowed temperature of 121 degrees centigrade. And in the record flying, I got as high as high as 151degrees

centigrade when the full afterburners were lit. The chase planes couldn't keep up with me, even Chuck Yeager's.

"People don't listen up when we talk about speed these days. They are so used to discussions about satellites traveling through space at speeds up to 17,000 mph and rocket planes like the X-15 going 4,000 mph, reaching altitudes of 300,000 ft. above earth, that my speed flights might look pale by comparison. But you've got to realize that missiles, satellites and rocket-powered vehicles have only a minute or two of power to shoot them at high speeds. After that the vehicle is flying as a result of inertia. Flying an airplane 1,430 mph for 47 seconds, or three minutes, or 16½ minutes and even longer makes for rough, hairy rides. Real satisfaction came from these accomplishments.

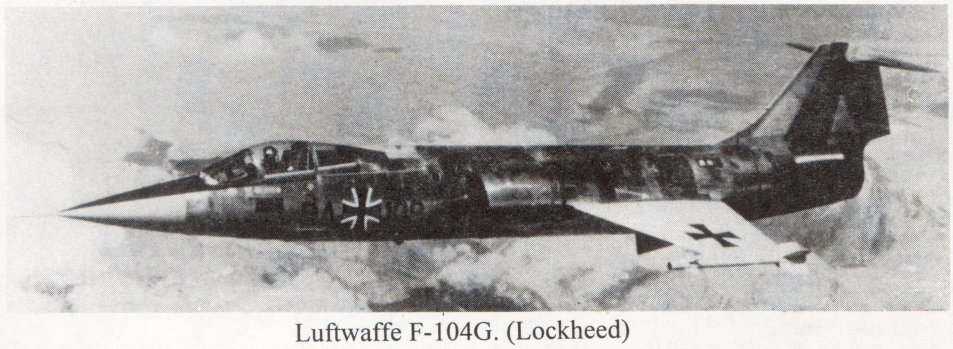
"It could touch ground at 225 miles per hour, and to slow down, I had to eject a parachute from the tail of the plane. You had to keep power up to 92% coming in for a landing until the wheels touched ground. If the power failed when you were still in the air, the sink rate of the ship was about 11,000 ft. per min. You'd be dead. The wings were only seven feet long. It was more like a manned---or womaned---rocket. But it sure could perform."

Cochran set several new speed records in a Starfighter G: In 1963, she flew 1,273.109 mph over a 9-12 mi. course and 1,203.686 mph over a 62 mi. course. A year later she broke two of her own records: 1,429.297 mph in the 9-12 mi. course: and 1,302 mph in the 62 mi course, and then broke another record by flying 1,135 mph on the 311 mi. course. Flying these courses took every bit of Cochran's concentration! "Picture in your mind a rectangular tunnel, 300 ft. high, a quarter of a mile wide, and extending 20 mi. long through the air at an altitude of 35,000 ft. I had to fly through that tunnel at top speed without touching a side. There were no walls to see but radar and ground instrument let me know my mistakes immediately. Up there at 35,000 ft. the temperature would be about 45 degrees below zero. Not pleasant but perfect for what I was doing. Inside the plane you are hot because of the friction of speeding through the air like that. The cockpit was air-conditioned, but when you descend, things happen so fast the plane's air-cooling system can't keep up with it. I was always hot and perspiring back on the ground. The 100 kilometer (62 mi.) closed course was so damn difficult. Imagine an absolutely circular race track, about a quarter of a mile wide, on the ground with an inner fence exactly 63 mi. long. Now, in your mind's eye, leave the track and get into the air at 35,000 ft. Fly it without touching the fence in the slightest. It's tricky because if you get too far away from the inner fence, trying not to touch, you won't make the speed you need to break the record. And it you get too close, you'll disqualify yourself. Eyes are glued to the instrument panel. Ears can hear the voice of the space positioning officer. You are dealing in fractions of seconds. And your plane isn't flying in flat position. It's tipped over to an 80-degree bank to compensate for the circle. That imaginary inner fence may be to your left. That'd lose you altitude. Instead, you pull the nose up a bit and because your plane is so banked over, you move closer to the inside fence. You turn. But I had been flying these measured kilometer courses for so many years. Way back in the forties I made a 100 kilometer record that still stands in both men's and women's categories for propeller driven planes. If I had to choose the most exciting adventure I've ever had in the air, I'm sure I couldn't. But flying the Starfighter ranks right up there."

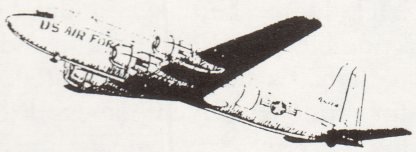
The Red Baron

Probably the most unusual Starfighter record was set by Darryle Greenamyer (who also held the world piston engine speed record in an F8F Bearcat) on October 24, 1977 for the "Restricted Altitude" 1.86 mi. course. Greenamyer flew scant feet above the ground setting a 988.16 mph speed record in a Starfighter. Greenamyer built his *Red Baron* Starfighter himself from parts obtained all over the world.

Ultimately the Starfighter served for over two decades, evolved through eight models, flew in the air forces of 15 countries, and was produced both in the U.S. and seven foreign countries. Not only was the F-104 the first fighter to fly twice the speed of sound in level flight, but also it set speed and altitude records to secure its place in aviation history. And in 1959, Kelly Johnson, General Electric and the USAF shared in the receipt of the Collier Trophy for the design of the engine and airframe and the flight records for the F-104. ✪



Luftwaffe F-104G. (Lockheed)



OPERATION VITTLES

The 1948 Berlin Airlift

by Jack B. Stankrauff

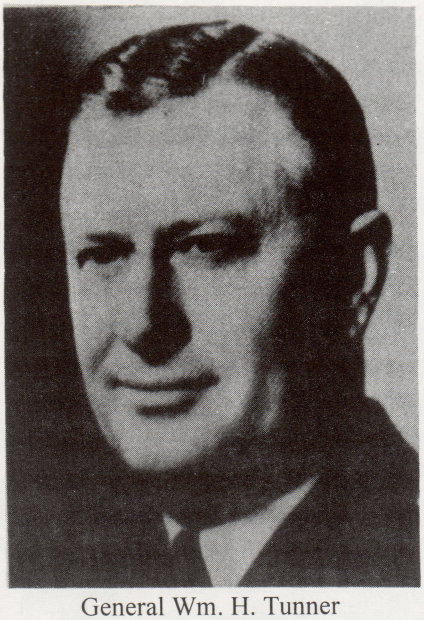
West Berlin was virtually an island surrounded by the Russian Zone of Occupation in 1948. The Allies---the United States, Britain and France---were preparing to create the Federal Republic of Germany and introduce a new currency, the Deutsch Mark. Believing the allies to be vulnerable economically and militarily, the Russians demanded that the Mayor of West Berlin accept their currency for both East Berlin (controlled by the Russians) and West Berlin (controlled by the Allies) and gave him the deadline of June 23, 1948 to obey their ultimatum. The West Berlin city government officials refused.

A Russian Bear Hug

During the evening of June 23, the Soviets shut off all electricity to West Berlin and halted rail and road passenger and freight traffic in and out of the city. Russian tanks began massing on Germany's borders. Without food and fuel for the West Berlin people, their factories and homes, this city---the size of Philadelphia---would be helpless and starve. West Berlin had only 10 days of coal and 30 days of food left. Many foreign diplomatic analysts believed this crisis could lead to World War III. The Russians intended that their choking off West Berlin would force the Allies to abandon the city. Western diplomats failed to sway the Russians. West Berlin, at this point in the Cold War, stood as a symbol against Communist tyranny.

General Lucius Clay, commander of U.S. forces in Europe, wrote his superiors in Washington "We are convinced that our remaining in Berlin is essential to our prestige in Germany and Europe. Whether for good or bad, it has become a symbol of American intent." The Russians had thrown down the gauntlet and the stage was set.

Two choices faced the Allies: Use military force or supply West Berlin by air. The latter option was chosen, but the Allies faced three challenges. First, the sheer number of West Berliners that would have to be supplied every need of their daily lives. Second, the poor seasonal flying weather over Berlin was legendary from World War II with its sleet, rain, snow and low clouds. Third, the U.S. Air Force and Britain's Royal Air Force didn't have enough transports immediately available to maintain such a monumental supply effort.



General Wm. H. Tunner commanded the Combined Airlift Task Force. (UAAF)

These challenges were offset by several advantages. The round-trip flying distances into West Berlin from nearby air fields were short--from 274 to 563 miles. The amount of supplies needed daily (depending on the season) was surmountable with the addition of airlift transport aircraft. America had a pool of competent pilots and air crews from World War II. The air lift effort had the enthusiastic support of Europeans and, more important, Berliners as well as U.S. President Harry S. Truman and Britain's Prime Minister Clement Attlee.

"We Can Haul Anything!"

There is a popular legend that General Clay urgently telephoned Major General Curtis LeMay, commander of the U.S. Air Force in Europe. "Can you haul coal?" he asked and LeMay replied, "General, we can haul anything!" The next day, June 24, a C-54 Skymaster loaded with food and supplies landed at Tempelhof Airport in West Berlin.

On October 29, 1948, the Air Force gave the job of running

Operation Vittles, the aerial supplying of West Berlin, to Major General William H. Tunner, Deputy Commander of the Military Air Transport Service. Tunner, called "Mr. Airlift" by his Air Force contemporaries, commanded the Hump airlift operations---supplying China over the hump formed by the Himalaya Mountains during the Second World War.

Combined Airlift Task Force

General Tunner and his British Deputy, Air Commodore J.W.F. Merer, set the American *Operation Vittles* and the British *Operation Plainfare* into motion. At first, transports were in short supply, but the Air Force and Royal Air Force quickly mobilized. The Air Force used its C-47 Skytrains and later replace them with C-54s. The C-46s performed extraordinarily well. One C-46 was mistakenly overloaded with 13,000 pounds of pierced aluminum planking for runways. After the transport was loaded, the pilot checked his manifest and it correctly showed the weight. Despite this overload, the pilot took off from Wiesbaden and nursed the plane at full throttle all the way to Berlin and landed without a hitch. (A total of 354 C-54s were allocated to *Vittles,* but the average daily number available was only 128---196 were down for maintenance and 30 were used for training.) Another aircraft the Air Force used was the C-82 Packet. The U.S. Navy contributed its R5Ds (Naval designation for C-54) to *Vittles.* The Royal Air Force's inventory for the Airlift included Dakotas (British Skytrains), Avro Yorks and Short Sunderland flying boats. The Sunderlands flew from

General Lucius D. Clay (USAF)

Finkenwerder into the Havel See in the Berlin suburb of Spandau. These big flying boats carried salt because their airframes were resistant to water corrosion. The implementation *Operation Vittles* was a shining example of air power being exercised around the clock seven days a week.

In the beginning, planes were stacked up waiting to land, wasting fuel. Tunner's Berlin Airlift Task Force staff organized a traffic pattern requiring every transport to be spaced three minutes apart at 200 miles per hour landing at Tempelhof. To maintain this pattern, all planes had to pass check points at precise heights at exact times. The pilot made a straight-in approach and if this failed, he was ordered to climb and return to his base then he'd try it all over again.

Three air corridors, each 20 miles wide with 10,000-foot ceilings, were established to Tempelhof (American Zone). Gatow (British Zone) and Tegel (French Zone). Additional airport runways were built, and those existing were lengthened. To handle the high air traffic volume of planes landing every 63 seconds, radar-guided ground-controlled approach systems were used.

Cargos included milk (whole milk at first, but for weight-carrying efficiency, condensed milk was substituted), raw materials, liquid fuel, coal, salt, construction equipment, foodstuffs of all kinds, industrial supplies, mail, newsprint, vehicles, medical supplies, and people (some children were evacuated from certain areas of the city for their safety).

Tunner's "Conveyer Belt"

Ground loading time for each plane averaged an hour and 25 minutes while the actual unloading time averaged 49 minutes. By July 17, 1948 1,000 tons were delivered to Berlin; by July 10, 1,500 tons, and by August 26, 100,000 tons. On Easter of the following year, a record 12, 941 tons were flown to Berlin. On average over 620 round-trip flights were made daily, weather permitting. The Soviets lifted their blockade on May 12, 1949, but flights continued until September 30 as a precaution. During *Operation Vittles,* over 2,325,000 tons (including 1,500,000 tons of coal and 500,000 tons of food) were delivered in 277,264 flights. Tunner added an operational note to *Operation Vittles:* "The actual operation of a successful airlift is about as glamorous as drops of water on a stone. There is no frenzy, no flap, just the inexorable process of getting the job done."

Mechanical demands on airlift planes was formidable. Each transport received 50-hour maintenance checks, and planes

were flown back to the United States for complete inspections and overhauls at 1,000 hours. Monthly U.S. Air Force fuel consumption before the airlift totaled 30,000 barrels and by January 1949, 191,000 barrels were used. By the time *Operation Vittles* ended, 100,000,000 gallons were consumed. Fuel was shipped on Navy tankers to Bremerhaven and reshipped by rail and pipeline to *Vittles* fields including Wiesbaden, Frankfurt Rhein Main, Schleswigland, . Wungstorf, Hanover, and Faseburg.

Bristol Freighters were especially useful for hauling bulky loads to and from Berlin

Personnel to fly these missions came from active Air Force rolls and veterans recalled to active service. They were checked out on Skymasters and flight procedures. Many practiced on mock-ups of facilities at Rhein Main and Berlin. It was pressure flying and Russian YaK fighters buzzing them didn't make the flights easier. But the crews still kept their senses of humor.

To relieve the tedium and tension of flights, one pilot had some fun. "BW 17 over Braunschweig at 05 at 7,000 feet upside down in a thunderstorm. What do I do now---over?" A confident, calm voice came on over the radio. "Now listen closely, son. Over your head there is a little switch marked 'Inverter.' Take your right hand off the wheel and move that switch to the rear position and when the red light next to that switch goes out, you will be flying right side up and then you go to Rhein Main---out."

Gun Silenced

Then there was the crew that frequently arrived at their billet near Rhein Main in the early morning hours after an arduous day of flight duty. A cannon would fire to call reveille at 6:00 a.m. for the Army troops stationed near the billet. The Army post commander refused to stop the ritual cannon firing, which robbed the flyers of their needed sleep. The crew responded in an ingenious fashion. Using rope, block and tackle, they hoisted the offensive cannon to the top of their four-story billet. No cannon shots were heard for the duration of *Operation Vittles.* And there was also a touch of human kindness during the airlift.

Schokoladenflieger

During his World War II service in North Africa and Italy, Lieutenant Gail S. Halvorsen had seen children begging for gum, candy and cigarettes. But during the Berlin Airlift the C-54 pilot was struck by the polite reserve of the German children. "I got in the middle of these kids, and what do you think happened? None of them jerked at my pants...They wanted to hold a polite conversation and try out their English on me. Their English is about as bad as my German. After about one hour, in which I gained considerable stature as an airlift pilot, I noticed something was missing. I couldn't put my finger on it, but it nagged me. And finally I realized what it was. Those kids hadn't begged for a single thing...It wasn't lack of candy-hunger that held them back; they just lacked the brass other kids have. So I told them to be down at the end of the runway the next day and I'd drop them some gum and candy. That night I tied up some candy bars and gum in handkerchiefs and had my chief sling out on signal from me the next day. Day by day the crowd of kids waiting for the drop got bigger, and day by day my supply of handkerchiefs, old shirts, GI sheets, and old shorts, all of which I used for parachutes, gets smaller." Several other pilots succeeded Halvorsen as the *Schokoladenflieger* ("Chocolate Flyer") dropping well over 150,000 candy treats to Berlin children. These flyers served as some of the best good will ambassadors the United States Air Force ever had.

Future Building Blocks

The Berlin Airlift provided the Air Force valuable experience in conducting airlift operations and prepared it for the coming operations of the Combat Cargo Command during the Korean War. Moreover, this airlift added to procedures and knowledge of medical air evacuation which would prove extremely valuable both in Korea and much later in Vietnam. Additionally, the Allies obtained 100 new military air fields in Europe.

Operation Vittles---the greatest peacetime achievement of air power---showed the world that military transport could help humankind and demonstrated to the German people that the West was compassionate and still cared about their welfare. It impressed upon the entire world that the Allied nations were still strong and resolute in the face of Soviet Russia's bullying threats.

"Berlin Bliebtdoch Berlin!"

Mayor Ernst Reulter welcomed the end of the blockade, declaring: "The attempt to force us to our knees has failed, frustrated by our steadfastness and firmness. It failed because the world heard our appeal and came to our assistance...*Berlin Bliebtdoch Berlin!* (Berlin will always remain Berlin!)."

The 31 American and 41 British airmen and five German civilians who lost their lives in 12 crashes during the Airlift were honored by a monument in *Platz der Luftbrueke* (Airlift Plaza) in front of Tempelholf Airport. The Berlin Scholarship Foundation was organized to provide education funds for children of the airmen who died. ✪

Douglas C-54 hauls the goods as Berlin children watch

The Write Stuff

We Get Letters!

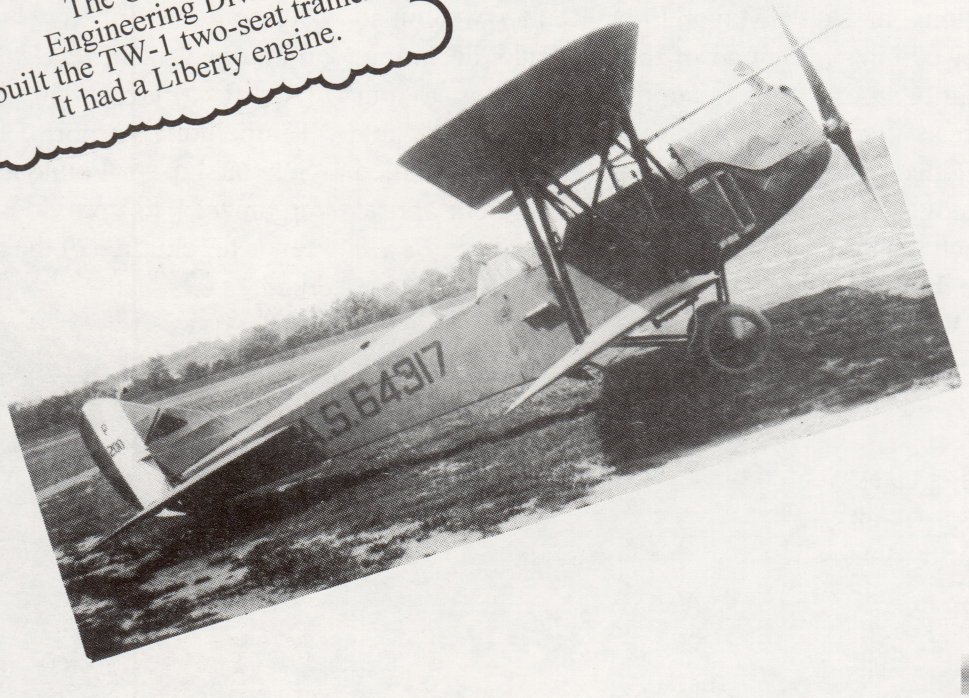
For reasons unknown, the Jan-Mar 96 YANKEE WINGS came in this week and the article on the F-84 caught my attention. A few corrections are in order, if I may?

The three photos on page 12 are captioned incorrectly. The top one shows three F-84s, not Gs, the middle one also an F-84, not a D, and the Bottom G is from the 9th FBS, not the 94th. The bottom photo on page 13 is an F-84G, not a D. On page 14, while the F-84E was the first to carry bombs on an air to air refueling mission, the very first such type mission in a combat zone was with an RF-80A, and then a fully armed F-80C flew such a mission. Also on page 14, the 27th FEG took F-84Es into combat in 1950, not Ds. The Ds came later as replacement aircraft, and from what I've heard in over 40 years with the AF, these were junk, pulled from storage in hot climate with no overhaul, as insulation on wiring would come off when one squeezed the wire bundles in the wheel wells! The Ds back to ANG units.

Just thought you'd like to know.

/S/ D Menard

The U.S. Army's Engineering Division built the TW-1 two-seat trainer. It had a Liberty engine.



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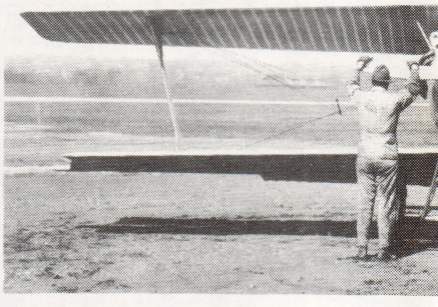

The Thomas-Morse TM-22 observation craft had a corrugated metal fuselage and a larger lower wing.

The U.S. Navy
acquired 230 NE-
which were Piper J-3 Cubs

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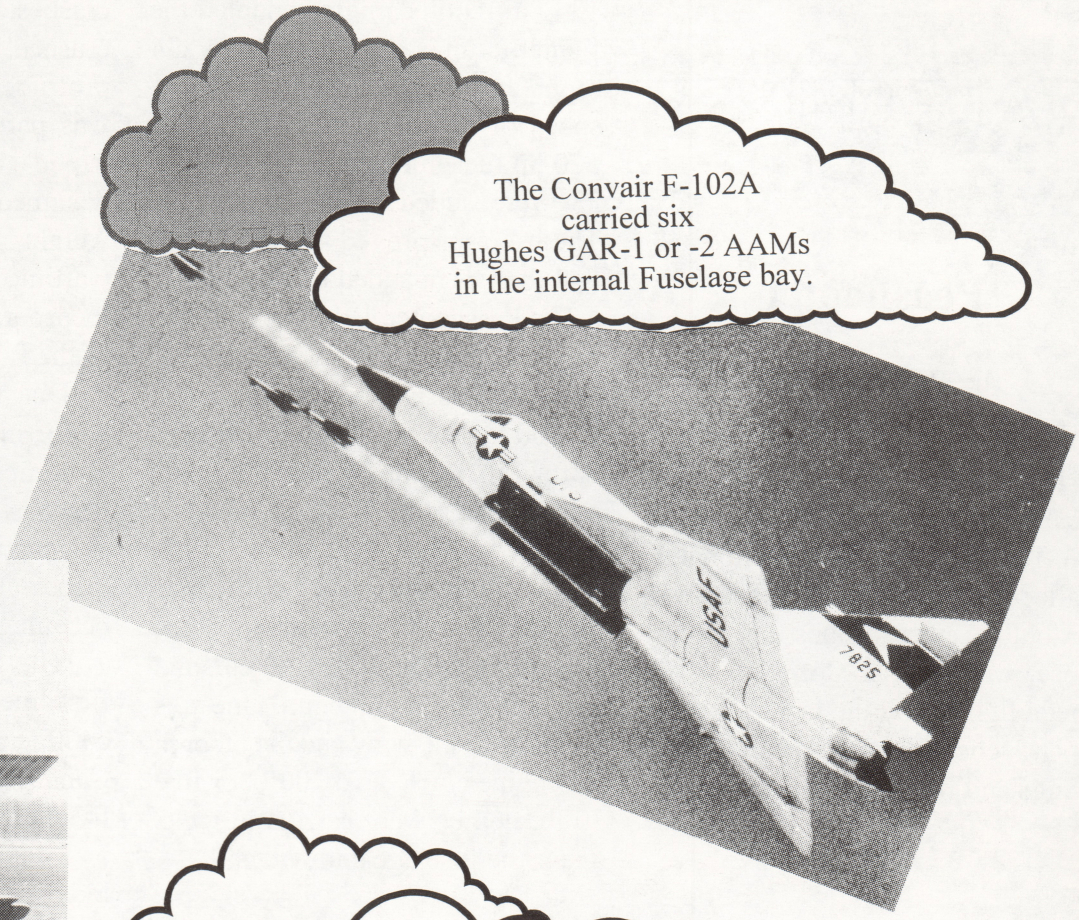
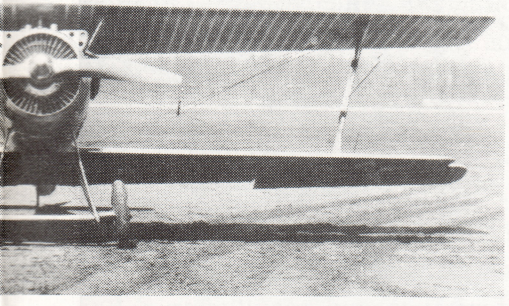
VINGS
. THE PHOTO SECTION

Photos From The udek Collections:



The Convair F-102A carried six Hughes GAR-1 or -2 AAMs in the internal Fuselage bay.

prepares the VCP-1.



The two-place Douglas O-31A observation plane was powered by a 675 hp. Curtiss in-line engine.

ls, in warpaint.

TALE SPINS

Peashooter

by Jack Stankrauff

The first monoplane fighter of the Army Air Corps was the nimble P-26. This little aircraft, affectionately called the "Peashooter" because of its bulbous streamlines and stubby nose, was the Air Corps' first all-metal fighter and the last to have an open cockpit, externally-braced wings and fixed landing gear.

Genesis

Boeing developed three prototypes of the proposed design, known as Model 248, in 1932. The first of these, the XP-936, successfully took to the air on March 20, 1932. To assure the air-worthiness of this new aircraft, Boeing embarked on a long series of tests and operational flights. The design represented a radical departure from the biplanes in the Air Corps' past. Interestingly, the Peashooter was the very last fighter to be equipped with a series of wires on its wings to prevent collapse from high G forces.

Boeing's development program of its XP-936 reaped new rewards when the Army Air Corps placed an order for the fighter, which it designated P-26A. Deliveries began in January 1934, and ended six months later. Boeing produced a total of 148 Peashooters.

A Pratt and Whitney 500 hp R-1340 air-cooled engine enabled the fighter to muster a top speed of 234 mph (at 7,500 ft.) with a cruising speed of 210 mph. More powerful 600 hp fuel-injected Wasp R-1340-33 were added to the B models. These Wasps proved so satisfactory that they were added to all models.

The Peashooter had a 107 gal. fuel capacity, which provided a range of 360 mi. Its service ceiling was 27,400 ft. The Peashooter measured 23ft., 7 in. in length, 10ft. high with a wingspan of 27 ft., 11 in. and had a gross weight of 2,955 lbs.

The Peashooter's ordinance included two .30-cal. machine guns or a combination of one .50-cal. and one .30-cal. machine gun. One was mounted in the wing and the other in the engine cowl. Two 100lb. or five 30 lb. bombs were carried in racks under the fuselage and wings.

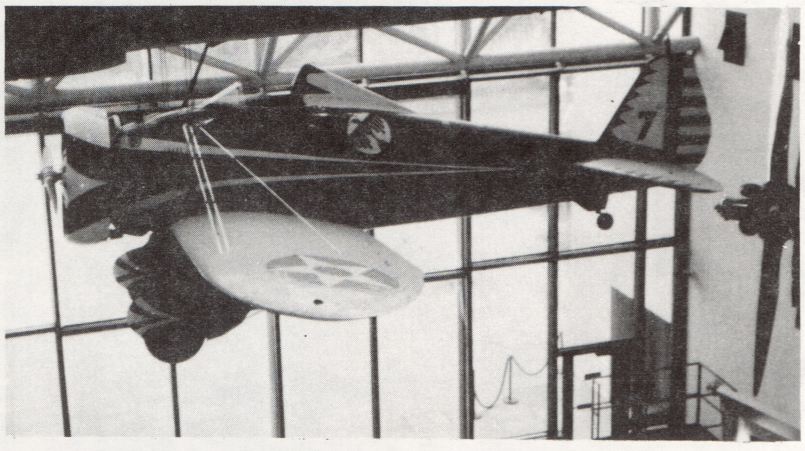
Pilot Protection

A significant modification in the A model's low pilot headrest was made after a P-26A overturned during a landing, killing its pilot. The headrest was raised eight inches higher on all models. Ex-P-26 pilot and World War II air leader who commanded the Eighth Air Force, General Ira Eaker, recalled: "There was, at first, a slight increase in fatalities in fighter groups equipped with the P-26A. When the airplane turned over in landing crashes, pilots were sometimes crushed, since their necks and heads protruded above the cockpit. This was partially alleviated by a steel tripod behind the pilot's seat, designed to bear the aircraft's weight in case of turn-over. All wartime low-wing single-seaters incorporated this feature as a result of the P-26A pilots' experiences."

Due to its small (149½ sq. ft.) wing, high landing speeds of 82-plus mph. made Peashooter pilots nervous. Landing flaps were added, slowing the landing speed to a more respectable 73 mph. These flaps became standard on all models.

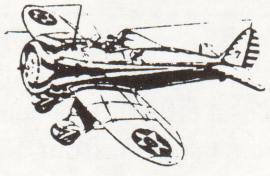
The P-26 served as America's first-line defense fighter in the continental United States, Panama Canal Zone and Hawaii for nearly five years.

Pilots who flew the Peashooter liked it. Eaker remembered his experiences: "We were immediately impressed and delighted with its many advanced characteristics in performance and maintenance. Its low wing permitted excellent forward visibility, while its toe pedal brakes shorted the landing roll greatly. However, it was its maneuverability, loop, roll, climb and dive capability which impressed



NASM's P-26 in the colorful markings of the 34th Pursuit Squadron. (Author)

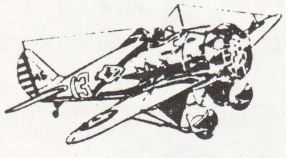
us most. It was also a better gun platform, with improved target visibility for its two .30-cal. machine guns, firing through the propeller disc."



Late in the 1930s, some P-26s were sold to Panama and Guatemala. (In the latter country, Peashooters remained in service as late as 1957!) Eleven went to China, where they were used in the aerial defense of Nanking and Shanghai. In 1941 Peashooters were transferred to the Philippine Army. While all were lost in the Japanese attack, one P-26 was credited with destroying an enemy bomber.

Eaker lauded the P-26 Peashooter: "It was...an essential intermediate fighter type and was invaluable in the training of the fighter pilots of that period, many of whom became the aces and squadron and group commanders of World War II...All of us who learned our fighter tactics...how to fly and shoot...always had a real nostalgia for this little toy in which we gained maturity and experience required for air battles against the Luftwaffe's Focke Wulf FW 190 and the Japanese Zero."

A surviving P-26 is on display at the Smithsonian Air and Space Museum.



Board Approves
1996 Election Results
By Jim Hanford

The National Board of Governors unanimously ratified the Election Committee report and recommendation that the results of the 1996 YAF general election be certified and that the ballots be destroyed, there having been no challenges received to the election results. All six by-laws changes passed by margins of five-to-one or greater. Members of the Election Committee (**Barbara A. Sutton**, Chair, **James D. Hill, Keith Jones, Kenneth Ponchart** and **Aaron Peters**) were commended for their services. The following individuals were elected to offices as indicated:

President:
Randall Kimberly

Vice-President:
Frank Modlinski

National Directors:
Donald Harner
Richard Bodycomb
Raymond Hunter
Daniel Tomczak
Brian Moehring

Note: **Robert Cagle**, who was a 1996 candidate for National Director, was appointed by the Board at their September meeting to the vacant seat previously held by **Richard G. Prince**. Cagle's term will expire on December 31, 1997.

The following members were elected unopposed to the respective council seats as indicated. Inasmuch as no division had a greater number of candidates than the number of open council seats, no ballots were issued.

Northeast Division:
Leon A. Dussault, Jr.
Dennis J. Golderer
Kim Golderer
E. John Monsport
Frederick R. Trudel
Declared elected at the NED Council meeting of October 23, 1996.

Mid-Michigan Division:
Gerald B. Smith
Richard R. Pilon
Andrew Robinson
Robert T. Jones
Ralph Gilpin
Declared elected at the MMD Council meeting of December 11, 1996.

Wisconsin-Illinois Stateline Division:
Max Elliott
Joe Quint
Ray New
Kevin Wixom
Richard Wixom
Declared elected at the WI-IL Council meeting of December 10, 1996.

Saginaw Valley Division:
Chet Rogolski
Marshall McGrath
Truman Thompson
Maurice F. Layrer
Fergus Mann
David Pietrowski
Declared elected at the SV Council meeting of December 14, 1996.

Wurtsmith Division:
Charles Jones
Clyde L. Saucie
Marvin Poland
Gerald Pierce
Declared elected at the WS Council meeting of October 16, 1996.

In other business the Board discussed a recommendation that the gift shop hours of operation be reduced during the winter months. Discussion followed concerning loss of potential revenue as well as public goodwill from visitors and telephone calls arriving when the museum is closed. It was then pointed out that income received during reduced hours last winter was not greatly affected. The President announced an executive decision authorizing reduced operating hours for the months of January and February, during which time the museum/gift shop will be closed to the public on Monday, Tuesday and Wednesday. The museum/gift shop will continue to be open Thursday through Sunday for the same hours as are observed the rest of the year.

FLYABLE AIRCRAFT SCHEDULING AND SUPPORT POLICY
Unveiled at Annual Meeting
by Jim Hanford

In terms of member interest, the policy for scheduling and support of Willow Run-based flyable aircraft into divisional events was the most popular topic on the agenda of the 15th Annual Meeting of the Yankee Air Force. All divisions were represented among the approximately 75 members who attended the event on Friday evening, September 20, 1996.

The flyable aircraft policy was presented by its primary author, Director **Grant Schwartz**, although it had been unanimously approved by the National Board of Governors. The basic provisions of the policy, which is printed in its entirety on page 19 are as follows:

- Each division is afforded scheduling priority every other year.
- Divisions exercising their priority should submit a **written** request to the Airshow Coordinator by November 15 of the preceding year.
- If no previous commitment has been made for a requested date, the request will be honored.
- After April 15 of the airshow year, all divisions have equal standing for any open dates, and any resulting aircraft appearances will not affect the receiving division's priority for the following years.
- Divisional support for a flyable aircraft includes a "Maintenance/Accrual Assessment," reimbursement of fuel and oil expended, two double-occupancy rooms per aircraft (if an overnight stay is required), and ground transportation for the entire aircraft crew.

A lottery was held to determine divisional scheduling priority. Divisions which drew odd-year priorities are Northeast and Wurtsmith, resulting in even-year priorities for Mid-Michigan, Saginaw Valley and Stateline.

Flyable Aircraft Status

Director of Flyable Aircraft Maintainence **Fred Lockwood** announced that "All three aircraft are in top excellent shape." The C-47 received an annual inspection during the first quarter of 1996, and also had a glider towing package installed, however there are no current plans to attempt to tow anything. Up to the meeting date, the Douglas had participated in 29 different shows. During 31.1 flight hours the ship consumed 3575 gallons of fuel and 50 gallons of oil.

Earlier in the year the flyable aircraft maintenance room was refurbished, with the installation of new insulation, dry wall and shelving. Aircraft parts were sorted, and all parts are now stowed off the floor.

According to B-17 Crew Chief **Norm Ellickson**, the Fortress logged 81.5 flight hours while enroute to and participating in 22 airshows and flybys. It consumed 17,000 gallons of fuel and 1269 gallons of oil, and "earned" approximately $85,000 in appearance fees, tours and retail sales. He mentioned only one "incident" - a difficulty in deploying flaps upon take-off from Batavia, NY. It was discovered that **Todd Hackbarth's** suitcase had jammed the flap handle, resulting a re-evaluation of how baggage is stowed.

Ellickson noted that maintenance is costly: tires now cost $1,700 each, when they can be found. The sole source is Dunlop of England, which only occasionally sets up a production run of the 56-inch-diameter ovals. Engines are also becoming scarce, particularly ones with nine good cylinders. Work planned over the winter includes the installation of a top turrent and "cheek guns" on each side of the nose.

B-25 Crew Chief **Ambrose Connelly** noted that the Mitchell had tallied approximately 40 hours of error-free flight. "It takes a lot of personalized hours to keep these aircraft ready for the shows," he noted.

Static Aircraft

Director **Lee Bassett** provided a brief overview of the status of the static aircraft collection. During the past year his crew completed the new entrance to the gift shop, "bird-proofed" the F-4 Phantom, prepared the OV-10 for painting, and painted the B-52 and the RF-84K. The latter was the first aircraft to join the Yankee Air Museum collection. It

was received as a "basket case" from a local playground.

On the fall-through-spring schedule is a major renovation to the aircraft park north of the hanger. Additional concrete bases will be poured and tie-downs provided for all aircraft without engines. In addition the collection will be arranged by major historical eras. The TF-102 presents a major corrosion control problem, probably stemming from the salt air which attacked the magnesium skin at its former home on Tyndall AFB. Also planned is the repainting of the Boeing 720 cockpit and the removal of two trees on the west side of the hanger.

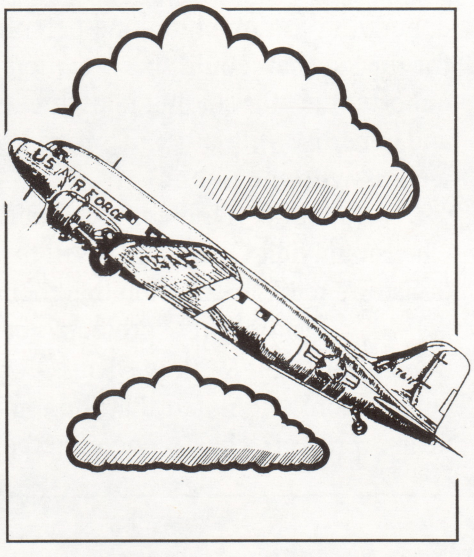
Officers' Reports

President **Randy Kimberly** explained briefly that he sees his primary accomplishment as creating a positive climate where the members have the necessary authority to get things done. He mentioned classes being provided during the weekend on Painting and Corrosion, Fabric-covered Aircraft, Financial Requirements for a 501(c)(3) Organization, and Feeding and Caring for a Lap-top Computer. The last course is required for at least one member of each division which plans to accept a YAF-provided lap-top computer. As for the state of the corporation, he noted, "The real state of affairs is extremely healthy - we can pay the bills this winter.

His report was preceded by that of Corporate Treasurer **Nancy Lockwood**. Among the highlights: the corporation's net worth on December 31, 1995 was listed as $1,785,000; the total cost of repairs for the C-47 incident at Oshkosh in 1995 was $111,798.14. 1996 YTD income from all airshow activities amounts to $161,922, and cash in the bank totals $210,581.

Committee Report

Membership Chairman **Charlie Lingenfelter** announced that the total membership on September 1 was 1921, compared with 1862 on the first of the year, and the all-time high of 1950 on June 1, 1996. The total includes 279 life members and 81 junior members, the youngest of whom is **Gary, Jr.,** the five-week-old son of NED members **Gary and Virginia Wright.**



The breakout of members by divisions is: Willow Run - 1531; Wurtsmith - 111, Northeast - 89, Mid-Michigan - 79, Saginaw Valley - 65, and Stateline - 46. A group of 14 members in the Cleveland, OH region is working to charter a new division based in the Lorain area. Individual recruiting remains strong, with **Don Harner** and **Mary Ann Cripps** each accounting for over 30 new members. The number of non-renewals, however, continues to be a concern - since the first of the year, 232 new members have signed on, but 173 have failed to renew (of which 15 are deceased).

According to Museum Chairman, **Bill Lary**, the museum is more often seen by paying guests than by the YAF membership. Several projects were completed this year, including the restoration of the Link Trainer, which has been installed behind glass. Several engines have been restored and stands painted in the Engine Room. The Phantom cockpit trainer has been restored, courtesy of the B-52 crew. The B-17 display was updated, as was the DC-6 theater, the latter with a civil airlines display. Notable acquisitions include an R-4360 engine and B-25 models. The display in the hangar entryway was changed to a space theme.

Library Chairman **Harold Sherman** noted that an educational requirement of a 501(c)(3) organization is to maintain a library. The YAF library now contains some 8,000 books and technical manuals, an uncounted number of aviation-related magazines dating as far back as 1923, a growing collection of audio and video tapes, and over 1,000 aircraft photos, including approximately 200 of the Willow Run bomber plant. Excess library resources are periodically offered for public sale, however division libraries have the first right of refusal.

The collection has become a valuable resource for serious researchers. Examples include an individual who's writing a book about how the farm on which he was raised was transformed into the Willow Run Airport and bomber plant. Another was a PhD candidate at Eastern Michigan University, who was researching vintage air base

buildings. He found our hangar of such interest that he arranged an architectural tour for his class.

Divisional Reports

Former Northeast Division Chairman **John D. Golderer** reported that 1996 "...was a major step forward in our rebuilding process." With divisional membership on January 1, 1996 at an all-time low, their April fly-in of Headquarters aircraft to Essex County Airport became a rallying point, and fostered a positive attitude for the rest of the year. Although their L-2 did not fly (the wood-and-fabric aircraft needs recovering), their airshow season produced increased divisional participation and roughly three times the revenue of last year. They are receiving assistance from the FAA to make their British-built Hunting Percival Pembroke ferryable, and there's a 50-50 chance they'll have their new hangar erected at Sussex Airport by year's end.

The Mid-Michigan Division's June fly-in netted the division roughly $3,000, and the airport also posted positive results, noted Council Chairman **Dennis Garner**. Airport ownership has been transferred to Mayfield Township, with the DuPont family continuing as the Fixed Base Operator. YAF member **Dave Hengst** is the airport manager and a member of the airport board.

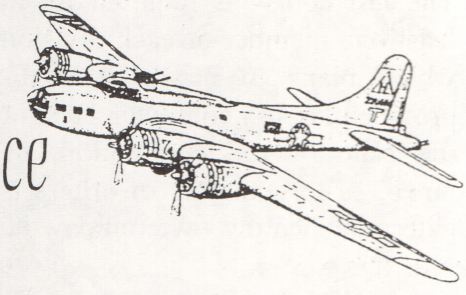
Their house on Bowers Road has been re-roofed, and they plan to open a museum with handicapped access in 1997. They are able to easily move their static display UH-1H, Iroquois helicopter between the house and the airport for public events. Garner cautioned against depending too much on one person for tasks that could be excellent opportunities for sharing knowledge and expertise with other members as well as with the public.

Stateline Division Council Chairman **Nick Quint** discussed the division's recommendation that their AT-11 restoration project be transferred to Willow Run for completion. He noted that the ten-year project has encountered roadblocks posed by the sale of Blackhawk Airways, upon whom they had depended for work space and numerous other resources, and the pool of qualified workers, which has dwindled to an unacceptable level. *(Editor's note: This topic has been discussed in recent board meetings, but is not resolved. Its evolving status will be reported in future issues.)*

The Wurtsmith Division's construction and renovation program is underway, and they expect to open in the spring of 1997, noted Council Chairman **Jim McLaughlin**. Their upcoming USO-style dance is "...the talk of the community," he added.

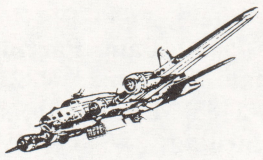
Work is in progress, albeit slowly, on their L-19 restoration. They have run the engine, but the airframe needs "...a lot of stripping and repair work," as well as a replacement right wing, since theirs is totally destroyed. They are making plans for a second aircraft, a Lockheed T-33 from Southwest Michigan College at Dowagiac.

Annual Sweetheart Dinner/Dance



Saturday, April 5 1997
Social Hour - 6:30 ~ Dinner - 7:30
Music by: Dale Williams
UAW Hall #735
4855 Michigan Ave., Canton, MI
Cost: $25.00 / person Call 483-4030 for tickets

The annual Sweetheart Dinner/Dance will, in 1997 be held on April 5, as the Spring Dinner/Dance. Other arrangements will be very similar to last year.

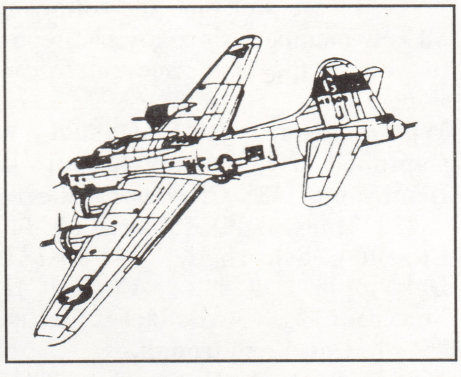


Scheduling & Support For Willow Run Based Aircraft Participation at YAF Division Events

The following policy will govern the scheduling and support requirements for Willow Run Division flyable aircraft, participating at events sponsored by other Yankee Air Force divisions. This policy will be effective January 1, 1997 and applies to those YAF divisions located within a 450 nautical mile radius of Willow Run Airport.

I. Scheduling

1. Each division will be afforded scheduling priority in alternating years. A random selection process will be used during the 1996 Annual Meeting to select those divisions with priority in even years, i.e., 1998, 2000, etc., and those divisions to hold priority in odd years, i.e., 1997, 1999, etc.
2. All requests for the scheduling of aircraft must be submitted **in writing** to the Willow Run Air Show Coordinator.
3. Many commitments to "outside" airshows and events are made a year or more in advance, therefore, divisions must submit their requests to the Air Show Coordinator as early as possible. Divisions exercising their scheduling priority should submit their request to the Air Show Coordinator by November 15th of the year preceding their "scheduling priority year" for the best choice of dates. If no previous commitments have been made, the request will be honored. Requests made after the ICAS Convention through April 15th of the "scheduling priority year" will be scheduled based on the remaining dates available.
4. After April 15th of a given year, all divisions will have equal standing to request, on a "first come, first served" basis, any remaining dates available for that year, regardless of that division's scheduling priority. If a division is successful in scheduling an aircraft



in a "non-priority" year, this will have no bearing on the scheduling process for the following year.
5. Normally, divisions will have the opportunity to schedule one aircraft and one date per calendar year. The choice of aircraft may be constrained by operational factors such as landing field length/conditions, availability of flight crews, or the maintenance status of the aircraft.

II. Support

Divisions requesting Willow Run Division flyable aircraft will be expected to provide the following financial and logistical support:

1. Maintenance/Accrual Assessment - not to exceed ½ of the current published appearance fee charged to 'outside' event organizers.
2. Reimbursement for fuel and oil consumed flying to and from the event location and Willow Run Airport, plus any local flying done at the sponsoring division's request. Normally, at least a portion of the fuel and oil will be 'boarded' on the aircraft at the event site, depending on operational requirements. Any balance due will be reimbursed at the then prevailing fuel and oil prices available to the YAF at Willow Run. When operationally feasible, the ratio of 'boarded' versus reimbursed fuel and oil will be handled in the manner most advantageous to the supporting division.
3. Published mileage based fees will <u>not</u> apply to YAF division sponsored events.
4. Two double occupancy rooms, per aircraft (B-17, B-25, or C-47), will be provided for the aircraft crews when an overnight stay is required. Expenses for any additional rooms required, will be covered by the aircraft crewmembers.
5. Ground transportation from the airport to lodging and restaurants will be provided for the entire aircraft crew. ✪

YAF People

Willow Run member **Bill Penland** is in the Yankee Air Force for the long haul. Although he only became a member in 1992, he had known about the YAF for many years - since 1981, when two friends joined. Penland, however, could not pursue two hobbies at the same time, and he chose muzzle-loading. "When that finally ran out," he explained, "I decided to hit the YAF."

He probably meant "hit the beach - running" because that better describes his activities to date. He designed and promoted the gray YAF tee shirts last year. He has spent over a year lining up the Ford and union publicity campaign (see page 21). At the same time he worked on the F-105 recovery team (he is now crew chief), as well as helping fellow Ford employee Dennis Dupuie restore an Allison V-1710, piston-operated V-12 in-line aircraft engine. Having restored it to running condition,

Bill Penland (Author)

they constructed a special trailer in order to haul it to open-air events, such as this year's Founders' Day. They plan to take it to automobile shows next year. "It's a good crowd-pleaser," he said.

The YAF seems to be a good outlet for Penland, who is a former USAF engine mechanic. During his active duty, he went through B-29 technical school and eventually wound up at Wheelus Air Force Base in Libya. After discharge, he served with **Lee Bassett** in the 107th Fighter Squadron, Michigan Air National Guard, which was then quartered at Wayne County (now Detroit Metro) Airport. When the 107th swapped their F-89Cs for F-84s, its manning level was cut, and Penland was among those "laid off."

After taking a variety of jobs including ship repair, road building, iron working and elevator repair, he settled down as a millwright at Ford. Although he has enough credits to retire, he figures he'll stay a few more years. In hobbies he has also run the gamut, from muzzle-loading to cross-country skiing, SCUBA diving to sky diving. But "his biggest hobby is aviation." What does he like about the YAF? "The planes (and) the people - there's a camaraderie there."

MEMBERSHIP REPORT

Welcome New Members

By Charlie Lingenfelter

The total membership of the Yankee Air Force as of December 1, 1996 is 1,917. Please welcome the following 88 new members since my last report to you in the last issue of *Yankee Wings:*

Willow Run: #5436 **Donald V. Campbell III,** #5437 **Lowell L. Dennison,** #5438 **Charles L. Sheetz,** #5439 **Douglas O. Swartz,** #5440 **Eugene L. Schnebelt,** #5441 **Jack T. Dalrymple,** #5442 **Earle H. Stevenson,** #5443 **Michael S. Vetter,** #5444 **Don Yarborough,** #5445 **Bart Yarborough,** #5446 **Rudolf van der Velden,** #5447 **Diana D. van der Velden,** #5448 **Rick Robinson,** #5449 **Mark L. Bassett,** #5450 **Richard V. Whelan,** #5451 **Gerald R. Schemansky,** #5452 **William M. Lidyard,** #5453 **Nancie Waldron,** #5454 **Ronald W. Hoover,** #5455 **Thomas F. Weston,** #5456 **John F. Fischer,** #5457 **William Nunweiler,** #5458 **Sid Ackermen,** #5459 **Paul P. Stojkov,** #5460 **Donald Vecsey,** #5461 **Robert J. Zak,** #5462 **Norman R. Fisher Jr.,** #5463 **Owen Steigelmeier,** #5464 **Paul Wikarski,** #5465 **Ronald Kowalski,** #5466 **Cecil Shelton,** #5467 **Andrew Clark,** #5469 **Larry Solomone,** #5470 **Harold W. Rudolph,** #5471 **George W. Riehl III,** #5472 **Louise Gettman,** #5474 **Paul R. Dawson,** #5475 **Anne H. Hiemstra,** #5476 **LeRoy L. Nelson Sr.,** #5477 **Larry Franklin,** #5478 **Mark Brothers,** #5479 **Colleen Brothers,** #5480 **Pam Parrington,** #5481 **Donald Johnson,** #5482 **John C. Teeft,** #5483 **Mike Dunn,** #5484 **Shawn Harding,** #5485 **Walter Golick,** #5486 **Aubert J. Thrasher,** #5487 **William Wren,** #5489 **Robert M. Niemi,** #5490 **Frank M. Girard,** #5491 **Peter W. Fabien,** #5492 **Irwin S. Kaminski,** #5493 **Beth A. Fiorani,** #5494 **David M. Johnson,** #5495 **Harold Merritt,** #5496 **Dennis Sumner,** #5497 **Benjamin M. Ratliff,** #5498 **Aaron Enzer,** #5499 **Robert Baden,** #5500 **Nick Stone,** #5502 **Scott R. Kent,** #5503 **Christopher Gottlieb,** #5504 **Frank Sukel,** #5505 **Donald T. Shoebridge,** #5506 **Raymond J. Schnneder,** #5507 **Larry Bondes,** #5508 **Michael C. McCabe,** #5509 **Peter Yops,** #5510 **Leonard Root,** #5511 **Ronald Adelstein,** #5512 **Eugene R. Pittman,** #5513 **Carl Bernock,** #5514 **Stanley T. Brockway,** #5515 **Bradley Allstead,** #5516 **Michael W. Melasi,** #5517 **Robert E. Swanson,** #5518 **Gilbert Twiest,** #5519 **Brad Twoest,** #5520 **Ronald Hanes,** #5521 **Richard Hanes,** #5522 **Kevin E. Bancroft and** #5523 **Ronald S. Hill.**

Northeast Division:
#5468 **Amanda A Golderer,** #5473 **John R. Gravle**

Mid-Michigan Division:
#5501 **Edwin E. Forsberg**

Wisconsin-Illinois Division:
#5488 **William L. Eck**

Recruiters Recognized

The following members have received the Yankee Air Force Recruiter Award Pin for enlisting five or more new members: **Dick Bodycombe, Marvin Hoffricter, Mike McCarville** and **Catherine Hefke.** Those who have enlisted more than five new members have been awarded a number tab, which is attached to their recruiter award pin, for total number of recruits in increments of five. The following members have been presented numbered tabs: Ten - **Barbara Sutton, Lou Farkas Jr.** and **Marvin Poland.** Fifteen - **Bill Short.** Twenty-Five - **George Whitfield.** Thirty-Five **Don Harner,** *Our Number One Recruiter.*

YAF "SHINES" in Light of Publicity

by Jim Hanford

The Yankee Air Force has been introduced to over 1.3 million automotive, heavy equipment, aerospace, government and other employees and retirees who are members of the United Auto Workers Union, thanks to a two-page feature article which appeared in the November issue of the UAW magazine, *Solidarity*. In the same month the YAF was exposed to many of the 100,000 salaried employees of the Ford Motor Company via a 3½-minute video shown on the auto maker's internal television network. This publicity windfall resulted in large measure because of the tenacity of YAF and UAW member **Bill Penland**.

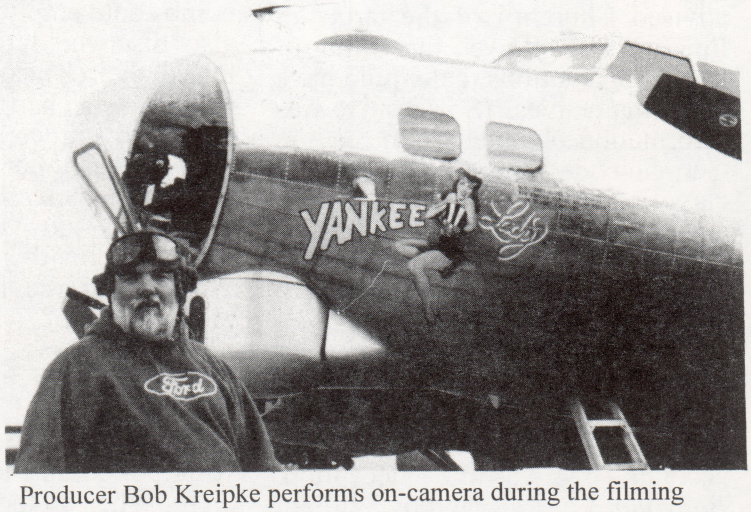
Another catalyst was *The Yankee Lady*, which was featured prominently in both presentations, along with the WACO CG4A glider restoration. The video story was produced by Bob Kreipke of the Ford Communications Network, as part of his weekly series featuring unique subjects from Ford's present and past. He interspersed clips of Ford's WW II production of aircraft engines, gliders and B-24s with live footage of the CG4A and his flight in the B-17.

The *Solidarity* article by Assistant Editor Michael Funke opened with a verbal description of his ride in *The Yankee Lady*, then focused on the contributions of members **Frank Modlinski, Todd Hackbarth, Bill Hanney, Joe Kosek, Hal Ratzlaff** and Penland, all of whom are current or former UAW members. In addition to short biographical sketches are a half-dozen full-color photos showing their participation in the YAF. We have photographic proof, for example, that Hackbarth can squeeze into the ball turret. Both presentations strongly suggested that the Yankee Air Force is an enjoyable experience, and included contact information.

Penland, a millwright at Ford's Dearborn Proving Grounds, (see also YAF People on page 20), worked for a year to set it all up. It involved numerous calls and meetings and even some "bugging" of the respective editor and producer before they were convinced it was a story worth their telling. Penland's "vision" was to expose the YAF through the publicity machines of the automakers and their salaried and hourly workers. The "carrot" would be a special tour of YAF facilities, plus a ride in the B-17. After months of negotiations with the media producers and key YAF leaders, it all came together during the 1996 Founders' Weekend. With the YAF at its best, the guests were presented with numerous photo and interview opportunities as well as the promised flights. The rest, as they say, is history.

Two successes, however, are not the end of Penland's vision. Considering the impending merger of the UAW with the United Steelworkers of America and the International Machinists' Union, he arranged for participation by their editors and photographers, and expects soon to see similar stories in their national publications. He then contacted the Observer newspapers, which resulted in several stories with photos in the downriver and Ann Arbor editions. In the meantime, Penland has submitted a flyer for inclusion in chapter newsletters of the three unions to reinforce at a local level that the Yankee Air Force has a lot to offer.

And the publicity may still not be finished. When the video was shown at a recent Willow Run membership meeting, Modlinski announced that General Motors' in-house communications facility has approached him about doing a documentary on the YAF. As if to emphasize the magnitude of it all, he added. "I can't think of another museum that's pulled this off." It's too soon to assess the full effect of these efforts, but within a few weeks of the Solidarity article, at least six new memberships could be credited to the "PR Blitz."



Producer Bob Kreipke performs on-camera during the filming of Ford Communications Network's special on how the YAF helps to preserve the history of Ford's WWII aircraft production. (Author)

DID CHURCHHILL "SACRIFICE" COVENTRY FOR ULTRA?

By Jim Hanford

Of the scores of English cities which became targets of the Luftwaffe during World War II, the average reader can probably name no more than two - London, for several reasons, and Coventry. Why Coventry? That was the target that Churchill knew in advance, but permitted no extraordinary countermeasures because he felt they might tip off the enemy that their code had been broken - right? Wrong, if you believe military historian Nigel West, who has written numerous books, articles and television scripts on British intelligence activities during WW II.

There is little dispute that on the night of 14 November 1940, German bombers devastated Coventry, inflicting 550 fatalities and another 1,000 seriously injured. It wasn't until 1974, however, that Group Captain F. W. Winterbotham suggested in his book, *The Ultra Secret*, that he had personally advised Churchill of the target in time to have allowed the taking of special precautions that would have saved many lives. (So sensitive was information obtained from reading German coded messages that it was classified TOP SECRET - ULTRA, and less than a dozen Allied leaders had access to it.) That Churchill did not act, Winterbotham concluded, was out of a greater concern for not jeopardizing the Allied ability to continue reading the German code. This charge was soon repeated by Anthony Cave Brown in his massive account of wartime deception, *Bodyguard of Lies*, and by William Stevenson in *A Man Called Intrepid*.

Was Churchill *really* forced to make such a decision? Nigel West says "No." Based upon Air Ministry papers declassified subsequent to the previous works, West constructed an entirely different scenario in his 1985 book, *A Thread of Deceipt*.

In the autumn of 1940, West writes, the RAF was getting information about the Luftwaffe's plans from no less than four different sources. The Air Ministry's Director of Air Intelligence was responsible for coordinating the results gleaned from all four sources, and had an active role in two: the interrogation of enemy aircrews and the examination of captured Luftwaffe equipment and documents. The other sources were electronic intelligence and the code-breakers.

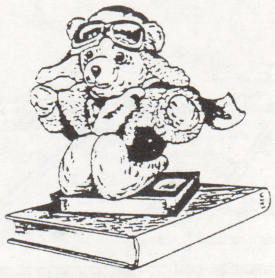
Electronic intelligence of the time included a response to a system of German radio aids known as *Knickebein* (literally "crooked leg"), which were designed to guide bombers onto their targets under cover of darkness. A transmitter on the Continent sent a continuous dot-dash beam, creating a radio path for the aircraft to follow, similar to U. S. airliners which "flew the beam." A second beacon transmitted intersecting beams which functioned as the signals to release the bombs. As soon as the system was discovered, the RAF set to work on counter-measures, such as predicting the targets, and even deflecting the beams just enough to send the bombs onto empty fields. The RAF also discovered that the Germans tested their beacons prior to each raid. So what happened at Coventry on 14 November 1940?

In mid-October Air Intelligence forecast an increase in night attacks, which would employ several hundred bombers at a time. Warning of the first such attack, code-named MOONLIGHT SONATA, was received on 11 November. Although no individual targets were specified, Air Intelligence obtained a captured map with four definite target areas drawn on it. When all the information was combined, a pattern emerged: a mass raid, guided by radio beams, around the 15 November full moon, and on targets in the London area.

The only note of dissent was a conversation between a captured bomber pilot and an RAF "plant", in which the former mentioned a mass attack on Coventry and Birmingham, scheduled for the period 15-20 November. This was the first mention of Coventry by name, and it had not come from a decryption. Apparently Winterbotham only *assumed* that it had, because when he wrote his book, he was prohibited access to actual decrypted messages in the British archives by their Official Secrets Act. Furthermore, the interrogating officer tended to discredit the report by noting that its reliability was unconfirmed.

Accordingly the RAF planned to deploy its limited aerial defensive resources mainly in the London area. But they had another card to play: a plan code-named COLD WATER would employ airborne jammers to disrupt the reception of the *Knickebein* beams by German aircrews, regardless of their destination. Furthermore, the RAF would launch a first strike on 27 Luftwaffe airfields in occupied France as well as on the *Knickebein* transmitters. The air strikes were executed (with the loss of ten bombers), but the jammers of the RAF's No. 80 Wing were totally ineffective, because they had been given the wrong frequency to jam. The cost of this miscalculation was paid by the citizens of Coventry.

In retrospect it is easy to understand how various authors who were ignorant of the efforts of Air Intelligence or the role of Operation COLD WATER would have concluded that Churchill made an informed and deliberate decision to protect ULTRA's secret at the expense of Coventry. West has made just as convincing a case to the contrary: (1) that the Prime Minister probably DID NOT have advance knowledge that Coventry was the *specific* target; (2) if he did have such knowledge, it DID NOT come from ULTRA; and (3) that if he DID make a conscious decision not to warn Coventry, it was based primarily upon the expected success of COLD WATER.



Armchair Aviator

Video: *Henry Ford's Aviation Ventures, 1924 - 1936*; Produced by Tim O'Callaghan

Reviewed by Jim Hanford

For anyone mildly interested in Henry Ford's significant contributions to the growth of commercial aviation, Tim O'Callaghan has done a second large favor. His first was publishing the book, *Henry Ford's Airport and Other Aviation Interests, 1909 - 1954* (see October-December, 1995 *Yankee Wings*). Now he has produced a video tape, which brings to life much of the material in the book.

In 1963 the Ford Motor Company gave the National Archives 1,300,000 feet of motion picture film taken between 1914 and 1939 by cameramen of the Ford Motor Photographic Laboratories. Additional Ford aviation footage was given to the Henry Ford Museum and Greenfield Village.

In researching material for the book, O'Callaghan was able to obtain all of the aviation film in these collections, and this provides the substance of this video. He soon realized that most of this footage had never been seen by the public, and only a small portion had been seen since the late 1920s. O'Callaghan has skillfully edited the sequences more or less into chronological order, and added narration and background music to improve the effect.

As a long-time student of aviation history, I am familiar with existing footage on the Ford Tri-Motors and the Ford Air Tours of the 1920s. In my opinion this video essentially doubles the amount of movie footage of Ford's aviation ventures prior to World War II, which is available to the public.

If you need additional reasons to purchase the video, consider the following: (1) aerial views of the Ford Airport illustrate the various stages of its construction; (2) footage of the first flights of each model of Ford/Stout aircraft, which have never been made available even to researchers; (3) the 1925 inaugural flight of Ford's Air Transport service between Dearborn and Cleveland, which carried all the parts of a Ford automobile. They were off-loaded and assembled into a driveable vehicle at the Cleveland Airport.

You'll also get the arrival at Ford Airport of Charles Lindbergh in the summer of 1927 during his 48-state National Air Tour. It was then that "Lindy" took both Henry and Edsel for their first airplane rides in the Spirit of St. Louis. Other sequences show the docking of Army and Navy airships at the Ford Airport's mooring mast, as well as the demolition of the mast in 1946.

During his presentation on the subject at a recent Willow Run general membership meeting. O'Callaghan described on a map of Ford Airport, which is now the Ford Motor Company's Dearborn Proving Ground, the location of the mooring mast, which was selected personally by Henry Ford. When reminded of discussions with Wayne County planners for a road to cut across part of the airport in the same area, Ford refused to change his mind. This is why the Southfield Freeway makes a generous S-curve south of Michigan Avenue.

The tape is available in the Yankee Air Museum gift shop, or by mail order anywhere in the United States and Canada from T & D Associates, Inc. P.O. Box 512, Northville, MI 48167 for $23.00 plus $2.00 shipping and handling.

Woodburn "Woody Schock, #G3608WR, passed awary August 12 from cancer. A YAF member since 1990, he was a pilot for Southern Air Transport.

Northeast Division member **Herman J. Koehler III,** #L3326NE, passed away on August 17, 1996. A full-life member since 1989, he served on the NED Joint Committee for a Tribute to Gerneral James H. Doolittle.

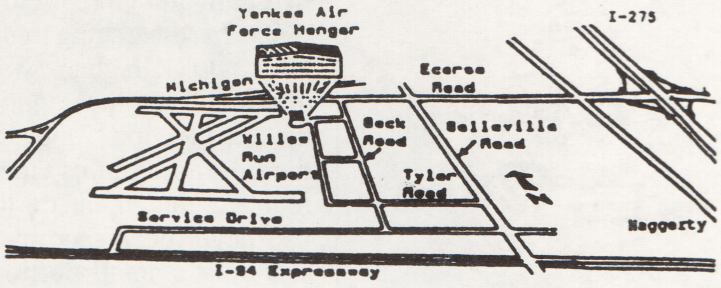
Clarence "Pappy" Holmes, #2786WR, passed away September 28. A member since 1987, his request was that memorial donations be made to the YAF restoration fund. (Several have been received.)

Arnold S. Oas, #SL1563WR, passed away October 11, after a lengthy illness. The native of Munising, MI served as a Staff Sergeant in the US Army during WWII. A YAF member since 1983, he lived and worked in the Detroit area until he retired from Ford in 1980. He then returned to Munising, where he pursued his hobby of nature photography.

Fred Dundas, #3825WR, passed away in February, 1996 from an aneurysm. During WWII he flew B-17s. A native of Indianapolis, he joined the YAF in 1991.

YAF HEADQUARTERS - WILLOW RUN AIRPORT

Take I-94 to Belleville Road exit, North to Tyler Road, west to Beck Road, turn right and enter through second gate on your left. Or take I-275 to exit 20 – Ecorse Road. Take Ecorse Road west to Beck, proceed south to first gate on your right.



CALENDAR

I. Standing Monthly Meetings:

1st Wed.	Hq. Div. General Membership (WR)
Quarterly	Membership Staf (Tues. following WR Gen. Membership)
2nd Tue.	Wurtsmith Div. Council (Place TAB) - 12:00 noon (WD)
2nd Tue.	WI/IL Stateline Div. Gen. Membership (followed by Div. Council) - 7:00 pm (WI/IL)
2nd Wed.	Mid-Michigan Div. Combined Council/Gen. Membership (MMD)
2nd Wed.	B-17 Restoration Crew (WR)
2nd Sat.	Saginaw Valley Div. General Membership - 9:30 am (SV)
2nd Sat.	Security Committee - 10:00 am (WR)
2nd Sat.	Static Aircraft Restoration Crews - 2:00 pm (WR)
3rd Wed.	National Board of Govenors (WR)
3rd Wed.	Northeast Div. General Membership - 7:00 pm (NED)
3rd Wed.	Wurtsmith Div. General Membership - 7:00 pm (WD)
3rd Sat.	Saginaw Valley Div. Council (SV)
4th Tue.	WI/IL Stateline Div. Council - 7:00 pm (WI/IL)
4th Wed.	Northeast Div. Council (NED)
Last Wed.	Mid-Michigan Div. Combined Council/Gen. Membership 7:00 pm (MMD)

II Notes:

- All meetings listed above are open to all YAF members
- All meetings begin at 7:30 pm, unless otherwise noted.
- Any additions or corrections to the calendar should be submitted to Jim Hanford, (313) 562-3283.

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